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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/941,710	08/30/2001	Katsuhiro Saitou	Q66039	6248

7590 07/23/2004
SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC
2100 Pennsylvania Avenue, N.W.
Washington, DC 20037-3213

EXAMINER

CONNOLLY, MARK A

ART UNIT	PAPER NUMBER
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2115

DATE MAILED: 07/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/941,710

Applicant(s)

SAITOU ET AL.

Examiner

Mark Connolly

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☒ Claim(s) 8-18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-18 have been presented for examination.

Claim Objections

2. Claims 5-7 are objected to because of the following informalities: "the circuit signal for turning the power supply circuit to the next disk drive group" should be corrected to state "the circuit signal for turning ON the power supply circuit to the next disk drive group". Appropriate correction is required.

3. Claims 16-18 are objected to because of the following informalities: "completing the starts of the disk drive groups if all the disk drive groups completed their starts." It is believed by the examiner that the completing of the starts of the disk drives would be completed if the groups have NOT completed their starts. In addition, the examiner believes that the above completing step and the initiating step immediately following should be integrated into a single step. Appropriate correction is required.

For examining purposes the completing and initiating steps have been interpreted as "completing the starts of the disk drives by initiating the start of a next disk drive if the disk drive groups have not completed their starts.

4. Claim 17-18 is objected to because of the following informalities: "A power supply control method for supplying and starting a plurality of disk drives having at least one disk drives with an electric power" should be corrected to state "A power supply control method for supplying and starting a plurality of disk drives having at least one disk drive with electric power." Appropriate correction is required.

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5. Claim 16 is objected to because of the following informalities: It is unclear to the examiner why a second decision would be made "whether or not the second set time elapses after the start initialization, if the second set time *does* not elapse after the start initialization". It is interpreted by the examiner that the above was meant to state, "... if the second set time *did* not elapse..." Appropriate correction is required.

6. Claim 17 is objected to because of the following informalities: It is unclear to the examiner why a second decision would be made "whether or not said disk drive start completion signal is received after the start initialization, if said disk drive start completion signal *is* not received." It is interpreted by the examiner that the above was meant to state, "... if the said disk drive completion signal was not received." Appropriate correction is required.

7. Claim 18 is objected to because of the following informalities: "disc drive groups" should be corrected to state "disk drive groups" in order to maintain consistency through the claim. Appropriate correction is required.

8. Claim 18 is objected to because of the following informalities: "wherein the foregoing steps are performed from for all the disc drive groups from the first disk drive group" is grammatically incorrect and the examiner urges the applicant to reword the claim using proper English. Appropriate correction is required.

For examining purposes the above has been interpreted to read, "wherein the foregoing steps are performed for all the disk drive groups beginning with the first disk drive group.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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10. Claims 16-18 recite the limitation "the lapse of a first time" in each of their respective deciding steps. There is insufficient antecedent basis for this limitation in the claim.

For examination purposes the above has been interpreted as "a lapse of a first time."

11. Claim 18 recites the limitation "deciding again whether or not said second time elapses" in the 4th deciding step. There is insufficient antecedent basis for this limitation in the claim. There were no previous references to a second time elapse in the claim and therefore it would be impossible to decide *again* if that second time elapsed.

For examining purposes the above has been interpreted as "deciding whether or not a second time elapses."

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 1, 2 and 4 are rejected under 35 U.S.C. 102(b) as being unpatentable over Kamo et al US Pat No 6012124.

14. Referring to claim 1, Kamo teaches the power supply control system including:

- a. a power source [abstract].
- b. a plurality of power supply circuits for supplying said plurality of disk drive groups individually with the electric power from said power source [fig. 5, col. 8 lines 40-53 and abstract]. Because the disks are powered from a single power source and because the drivers (390) only transmit a signal to notify one of the groups of disks to

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power up, it is interpreted that the signal is received at one of a plurality of power supply circuits, one associated with each group of disks, in order to begin the powering of the particular group of disks.

c. a control circuit for controlling said plurality of power supply circuits [fig. 5 and col. 8 lines 40-53].

d. wherein said control circuit generates, when said power source is turned ON, a circuit signal for turning ON said plurality of power supply circuits sequentially [col. 8 lines 40-53].

e. wherein said individual power supply circuits supply, when they receive said circuit signal, the corresponding disk drive groups with the electric power so that the starts of said plurality of disk drive groups may not timely overlap [figs. 5 and 6 and col. 8 lines 40-53].

15. Referring to claims 2 and 4, Kamo teaches powering the next group of disks after a first time elapses and after a certain disk drive groups completed its start [fig. 5].

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claims 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamo.

18. Referring to claims 5 and 7, it is well known in the art that devices can fail which could prevent them from turning ON when they are required to. It is also well known that these

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failures are detected after a timeout period has occurred in order to prevent system hang-ups. It would have been obvious to one of ordinary skill in the art to include a timeout period into the Kamo system because it would prevent a system hang-up in the event that any of the disk drive groups fail while attempting to turn ON. Furthermore, it is obvious that any length of time can be set for the timeout period and it is obvious by design choice that the timeout period could be set to a length which is shorter than a first time and the time necessary for starting one disk drive group.

19. Claims 3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamo as applied to claims 1, 2, 4, 5 and 7 above, and further in view of Igarashi Jap Pat No 06236964A.

20. Referring to claim 3, Kamo teaches powering ON disk drive groups individually through the use of a preset timer and does not explicitly teach turning ON the power supply circuit corresponding to a next disk drive group simultaneously with another disk drive group completing its start. In summary, Kamo does not explicitly teach sending a power ON command to a second disk drive group immediately after a first disk drive group completes its start up. Igarashi teaches sending a power ON to a second module immediately after a first module completes its start up [Fig. 1 and paragraph 0011]. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the Kamo system to include the teachings of Igarashi because it would provide the means to startup the disk drive groups individually without overlap while providing the added benefit of turning ON the plurality of disk drive groups in a minimal amount of time. More specifically, the preset time before turning ON the disk drive groups taught in the Kamo system may not be exactly the time required for the

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disk drive groups to turn ON. This time can vary due to the type of disk drives being used, thermal conditions or even possible errors incurred during startup.

21. Referring to claim 6, it is well known in the art that devices can fail which could prevent them from turning ON when they are required to. It is also well known that these failures are detected after a timeout period has occurred in order to prevent system hang-ups. It would have been obvious to one of ordinary skill in the art to include a timeout period into the Kamo-Igarashi system because it would prevent a system hang-up in the event that any of the disk drive groups fail while attempting to turn ON. Furthermore, it is obvious that any length of time can be set for the timeout period and it is obvious by design choice that the timeout period could be set to a length which is shorter than the time necessary for starting one disk drive group.

Allowable Subject Matter

22. Claims 8-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

23. Claims 16-18 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

Conclusion

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Connolly whose telephone number is (703) 305-7849. The examiner can normally be reached on M-F 8AM-5PM (except every first Friday).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas C Lee can be reached on (703) 305-9717. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mark Connolly
Examiner
Art Unit 2115

mc
July 19, 2004

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VISORY PAT
NOLOGY CENTER

